

## Intisari

Hama penting pada pertanaman cabai yang sangat merugikan adalah *Thrips* sp. dan *Aphids* sp.. Salah satu alternatif untuk menekan populasi hama tersebut adalah dengan penggunaan jamur patogen serangga *Beauveria bassiana*. Penelitian ini bertujuan mengetahui pengaruh perlakuan *B. bassiana*, *Bacillus* sp., jamur mikoriza arbuskular dan kombinasinya terhadap penekanan populasi hama penting pada tanaman cabai merah dan meningkatkan pertumbuhan serta produksi cabai merah. Percobaan dilaksanakan di lahan petani di Desa Banyudono, Dukun, Kabupaten Magelang, Jawa Tengah. Percobaan disusun menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan 7 perlakuan dan 3 ulangan. Parameter yang digunakan yaitu populasi hama, intensitas serangan, tinggi tanaman, panjang akar, volume akar, jumlah cabang produktif, jumlah bunga, jumlah buah, berat segar dan berat kering tajuk, berat segar dan berat kering akar, dan infeksi akar oleh jamur mikoriza arbuskular. Hasil penelitian ini menunjukkan perlakuan *B. bassiana*, *Bacillus* sp., jamur mikoriza arbuskular dan kombinasinya belum mampu menekan populasi hama penting tanaman cabai merah. Namun perlakuan kombinasi *Bacillus* sp. dan *B. bassiana* (P1), *Bacillus* sp. dan mikoriza (P2), mikoriza dan *B. bassiana* (P3), perlakuan tunggal *Bacillus* sp. (P4), dan perlakuan tunggal mikoriza (P6) mampu meningkatkan pertumbuhan dan produksi cabai merah.

Kata kunci: *Beauveria bassiana*, *Bacillus* sp., jamur mikoriza arbuskular, hama penting, cabai

## Abstract

The main detrimental pests of chili plantation are *Thrips* sp. and *Aphids* sp. One of the alternative control to suppress the pest population is the use of insect pathogenic fungi *Beauveria bassiana*. This research was aimed to study the effect of *B. bassiana*, *Bacillus* sp., arbuscular mycorrhizal fungi, and their combination to suppress on major the population of main pests of red chili and increase the growth and production of red chili. This research was done on farmer's land in Banyudono village, Dukun, Magelang Regency, Central Java. This study was arranged in Randomized Complete Block Design (RCBD) with 7 treatments and 3 replications. The parameters observed were pest population, pest damage intensity, plant height, root length, root volume, number of productive branches, number of flowers, number of fruits, fresh weight and canopy dry weight, fresh weight and root dry weight, and root infection by arbuscular mycorrhizal fungi. The result of this study showed that the treatment of *B. bassiana*, *Bacillus* sp., arbuscular mycorrhizal fungi and their combination were not able to suppress the population of the main pests of red chili plants. However the combination of *Bacillus* sp. and *B. bassiana* (P1), *Bacillus* sp. and mycorrhizae (P2), mycorrhiza and *B. bassiana* (P3), single treatment of *Bacillus* sp. (P4), and single treatment of mycorrhiza (P6) could increase the growth and production of red chili.

Keywords: *Beauveria bassiana*, *Bacillus* sp., arbuscular mycorrhizal fungi, chili, main pests